



US 20130037831A1

(19) **United States**(12) **Patent Application Publication**  
**Rudmann et al.**(10) **Pub. No.: US 2013/0037831 A1**(43) **Pub. Date: Feb. 14, 2013**(54) **OPTO-ELECTRONIC MODULE AND  
METHOD FOR MANUFACTURING THE  
SAME**(52) **U.S. Cl.** ..... **257/88**; 438/29; 257/E33.068;  
257/E33.002(75) **Inventors:** **Hartmut Rudmann**, Jona (CH); **Michel  
Barge**, Aeugst-am-Albis (CH)(57) **ABSTRACT**(73) **Assignee:** **HEPTAGON MICRO OPTICS PTE.  
LTD.**, Singapore (SG)(21) **Appl. No.: 13/569,707**(22) **Filed: Aug. 8, 2012****Related U.S. Application Data**(60) **Provisional application No. 61/521,818**, filed on Aug.  
10, 2011.**Publication Classification**(51) **Int. Cl.**  
**H01L 33/58** (2010.01)  
**H01L 33/08** (2010.01)

A method for manufacturing a device that includes an opto-electronic module includes creating a wafer stack including multiple active optical components mounted on a substrate wafer, and an optics wafer including multiple passive optical components. The optics wafer can include a blocking portion, which is substantially non-transparent for at least a specific wavelength range, and a transparent portion, which is substantially non-transparent for the specific wavelength range. Each opto-electronic module includes a substrate member, an optics member, an active optical component mounted on the substrate member, and a passive optical component. The optics member is directly or indirectly fixed to the substrate member. The opto-electronic modules can have excellent manufacturability, small dimensions and high alignment accuracy.

